Amendments to the Claims

1. (Currently Amended) A method for initiating occupant-assisted measures inside a ~~vehicle, particularly a~~ motor vehicle, wherein cerebral-current signals of at least one vehicle occupant~~, particularly of the driver,~~ are detected by a measurement technique, on the basis of the cerebral-current signals, the intention of the vehicle occupant is ~~estimated or~~ detected by real-time processing, based on the generation of motor intentions and preparations of movements of the vehicle occupant that are detected by extraction of correlatives from a brain current signal which are identifiable as individual events, and on the basis of the detected motor intentions and preparations of movements ~~intention~~ of the vehicle occupant, measures for transferring the current state of the vehicle into a state of the vehicle matched to the intention of the vehicle occupant are initiated in advance.

2. (Original) The method according to claim 1, characterized in that the physiological signals are detected non-invasively.

3. (Currently Amended) The method according to claim 1 or 2, characterized in that the cerebral-current signals are ~~cerebral signals such as e.g.~~ EEG, MEG, NIRS, fMRI and/or EMG cerebral signals.

4. (Original) The method according to claim 1, characterized in that the real-time processing of the measurement signals is performed by use of methods of signal processing and/or

machine learning which allow an evaluation of the measurement signals as individual signals and without extensive training of the occupant of the vehicle.

5. (Original) The method according to claim 4, characterized in that the methods for signal processing for adaptive feature extraction from the measurement signals comprise, alternatively or in any desired combination, at least one of the following features: a) filtration (spatial and in the frequency range) and downsampling, b) splitting and projection, respectively, c) determination of spatial, temporal or spatio-temporal complexity dimensions, d) determination of coherence dimensions (related to phase or band energy) between input signals.

6. (Original) The method according to claim 5, characterized in that the filtration comprises, alternatively or in any desired combination, at least one of the following features: a) wavelet or Fourier filter (short-time), b) FIR or IIR filter, c) Laplace and common average reference filter, d) smoothing method.

7. (Currently Amended) The method according to claim 5, characterized in that the splitting and projection, respectively, comprises~~, alternatively or in any desired combination,~~ at least one of the following features: a) independent component analysis and main component analysis, b) projection pursuit technique, c) sparse decomposition techniques, d) common spatial patterns techniques, e) common substance decomposition techniques, f) (Bayes') sub-space regularization techniques.

8. (Original) The method according to claim 4 or any one of the preceding claims as far as dependent on claim 4, characterized in that the machine learning method comprises a classification and/or regression, notably by use of a) core-based linear and non-linear learning machines (e.g. support vector machines, Kern Fisher, linear programming machines), b) discriminance analyses, c) neuronal networks, d) decision trees, e) generally, all linear and non-linear classification methods for the features obtained by signal processing.

9. (Currently Amended) The method according to claim 1, characterized in that the initiating measures are accident-preventive measures ~~such as e.g.~~ comprising a) automatic safety belt tightening, b) seat optimization, c) optimization of the vehicle reagibility to prepare a braking/steering operation, d) stability computations, e) pre-optimization of the vehicle dynamics in case of time-critical decisions, f) all predicative safety measures.

10. (Original) The method according to claim 1, characterized in that the intention or estimated on the basis of the cerebral-current signals serves for the verification of device-detected hazard situations, particularly by detection of a congruent motor intention build-up and situation modeling and validating.

11. (Original) The method according to claim 1, characterized by use and integration continuous vigilance monitoring.

12. (Original) The method according to claim 1, characterized in that the measures to be initiated are taken on the basis of an averaging of the intentions of a plurality of vehicle occupants.